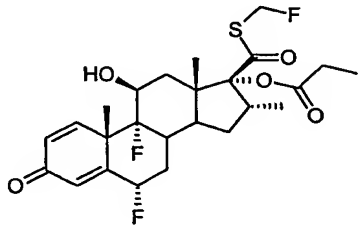
Claims:

1. A process for the preparation of S-fluoromethyl 6α,9α-difluoro-11β-hydroxy-16α-methyl-17α–propionyloxy-3-oxoandrosta-1,4-diene-17β–carbothioate, a compound of formula 1, comprising

(a) treating the compound of formula 3 with alkali metal carbonate-alcohol system to obtain the compound of formula 4;

(b) reacting the compound of formula 4 with bromofluoromethane to obtain the compound of formula 1.



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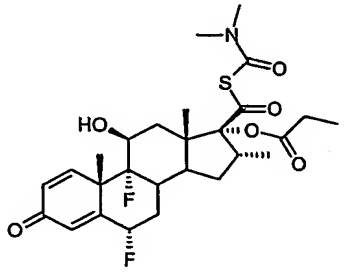

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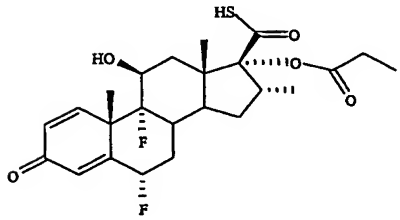

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2. The process as claimed in claim 1, wherein the alkali metal carbonate is potassium carbonate.

3. The process as claimed in claim 1, wherein the alcohol is a linear alkanol containing 1 to 3 carbons.

4. The process as claimed in claim 3, wherein the linear alkanol is methanol.

5. The process as claimed in claim 1, wherein the mole ratio of alkali metal carbonate to the compound of formula 3 is between the range of 1:1 to 10:1.

6. The process as claimed in claim 5, wherein the mole ratio of alkali metal carbonate to the compound of formula 3 is 1.5:1.

7. The process as claimed in claim 1, wherein the compound of formula 3 is treated with alkali metal carbonate-alcohol system at a temperature between the range of about 0°C to about 100°C.

8. The process as claimed in claim 7, wherein the compound of formula 3 is treated with alkali metal carbonate-alcohol system at a temperature between the range of about 20°C to about 30°C.

9. The process as claimed in claim 1, wherein reaction of the compound of formula 4 with bromofluoromethane is carried out at a temperature below about 15°C.

10. The process as claimed in claim 10, wherein reaction of the compound of formula 4 with bromofluoromethane is carried out at a temperature between the range of about -5°C to about 0°C.

11. The process as claimed in claim 1, wherein the alkali metal carbonate-alcohol system is potassium carbonate-methanol.

12. The process as claimed in claim 1, wherein the mole ratio of bromofluoromethane to the compound of formula 4 is between the range of 1:1 to 10:1.

13. The process as claimed in claim 12, wherein the mole ratio of bromofluoromethane to the compound of formula 4 is 1.3:1.

14. The process as claimed in claim 1, wherein reaction of the compound of formula 4 with bromofluoromethane is carried out in ketone solvent.

15. The process as claimed in claim 14, wherein the ketone solvent is acetone.

16. The process as claimed in claim 1, wherein the compound of formula 3 is prepared by reacting 6α,9α-difluoro-11β-hydroxy-16α-methyl-3-oxo-17α–(propionyloxy) androsta-1,4-dien-17β–carboxylic acid, a compound of formula 2, with N,N-dimethylthiocarbamoyl chloride in an inert aprotic solvent in the presence of an iodide catalyst and a base.

17. The process as claimed in claim 16, wherein the inert aprotic solvent is an ether.

18. The process as claimed in claim 17 wherein the ether solvent is tetrahydrofuran.

19. The process as claimed in claim 16 wherein the iodide catalyst is tetrabutylammonium iodide.

20. The process as claimed in claim 16, wherein the mole ratio of the iodide catalyst to the compound of formula 2 is 0.1:1.

21. The process as claimed in claim 16, wherein the base is triethylamine.

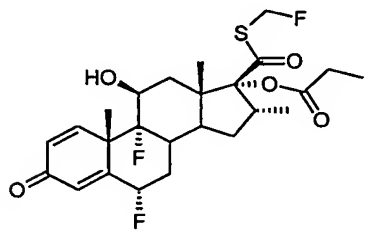
22. The process as claimed in claim 17, wherein the reaction is carried out at temperature between the range of about 0°C to about 25°C.

23. A process for the preparation of S-fluoromethyl 6α, 9α-difluoro-11β-hydroxy-16α-methyl-17α- propionyloxy-3-oxoandrosta-1,4-diene-17 β-carbothioate, a compound of formula 1, comprising

(a) reacting 6α,9α-difluoro-11β-hydroxy-16α-methyl-3-oxo-17α–(propionyloxy) androsta-1,4-dien-17β–carboxylic acid, a compound of formula 2, with N,N-

dimethylthiocarbamoyl chloride in an inert aprotic solvent in the presence of an iodide catalyst and a base to give a compound of formula 3,

(b) reacting the compound of formula 3 with a hydrosulfide reagent and bromofluromethane to obtain a compound of formula 1.



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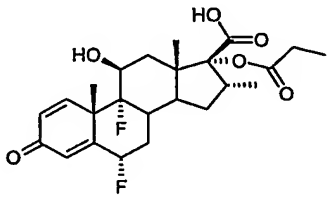

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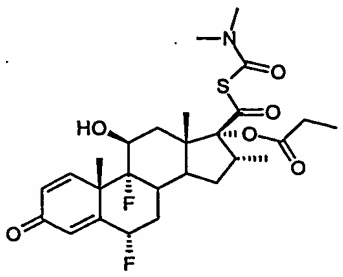

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24. The process as claimed in claim 23, wherein the inert aprotic solvent is an ether.

25. The process as claimed in claim 24, wherein the ether solvent is tetrahydrofuran.

26. The process as claimed in claim 23, wherein the iodide catalyst is tetrabutyl-ammonium iodide.

27. The process as claimed in claim 23 wherein the mole ratio of the iodide catalyst to the compound of formula 2 is 0.1:1.

28. The process as claimed in claim 23 wherein the base used is triethylamine.

29. The process as claimed in claim 24 wherein the reaction is carried out at temperature between the range of about 0°C to about 25°C.

30. The process as claimed in claim 23 wherein the hydrosulfide reagent is sodium hydrosulfide.

31. The process as claimed in claim 23, wherein the mole ratio of bromofluoromethane to the compound of formula 3 is 3:1.